

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) An electrolyte solution for use in an electrolytic capacitor comprising a compound having ~~an unsaturated bond-containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which ~~can-undergo~~ undergoes hydrogen addition reaction in ~~an~~ the electrolyte solution, ~~comprising at least one type of electrolyte selected from the group consisting of carboxylic acids or their salts or inorganic acids or their salts,~~ 10-80 wt% of an organic solvent and 90-20 wt% water.
2. (Currently amended) An electrolyte solution for use in an electrolytic capacitor comprising a compound having ~~an unsaturated bond-containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which ~~can-undergo~~ undergoes hydrogen addition reaction in ~~an~~ the electrolyte solution, ~~comprising at least one type of electrolyte selected from the group consisting of carboxylic acids or their salts or inorganic acids or their salts,~~ 15-80 wt% of an organic solvent and 85-20 wt% water.
3. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the compound having ~~an unsaturated bond-containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which ~~can-undergo~~ undergoes hydrogen addition reaction is soluble in water, polar solvents or protic polar organic solvents.
4. (Canceled)
5. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim ~~[[4]]~~ 1, wherein the concentration of the inorganic acid or its salt in the electrolyte ~~solution is~~ 0.1-15 wt %.
6. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim ~~[[4]]~~ 1, wherein the concentration of the carboxylic acid or its salt in the electrolyte solution is 3-30 wt %.

7. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the compound having ~~an unsaturated bond-containing chain is a compound having a molecular chain with a carbon-carbon or carbon-nitrogen π bond, such as an~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction comprises alkyne, alkene or imine, and comprising at least one substituent group selected from the group consisting of hydroxyl, formyl, carbonyl, acyl, carboxyl, sulfonyl, sulfinyl, sulfenyl, amido, amino, alkylamino, dialkylamino, alkoxysilyl, silanol, phenylcarboxyl, nitrile, nitro, nitroso, phenol, phosphono, esters and ethers.
8. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the compound having ~~an unsaturated bond-containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction is included in an amount of 0.1-10 wt% based on the total weight of the electrolyte solution.
9. (Previously presented) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the organic solvent is a protic solvent or an aprotic solvent, or a mixture thereof.
10. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the carboxylic acid or its salt is selected from the group consisting of monocarboxylic acids, dicarboxylic acids, tricarboxylic acids, saturated carboxylic acids and unsaturated carboxylic acids ~~such as formic acid, acetic acid, propionic acid, butyric acid, p-nitrobenzoic acid, salicylic acid, benzoic acid, oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, fumaric acid, maleic acid, phthalic acid, azelaic acid, citric acid and hydroxybutyric acid, and their derivatives and ammonium salts, sodium salts, potassium salts, amine salts and alkylammonium salts.~~
11. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, wherein the inorganic acid or its salt is selected from the group consisting of inorganic acids and inorganic acids having ~~[[a]] an alkyl carbon chain like alkyl, such as phosphoric acid, phosphorous acid, hypophosphorous acid, boric acid, sulfaminic acid and~~

~~alkylphosphoric acids~~, and their ammonium salts, sodium salts, potassium salts, amine salts and alkylammonium salts.

12. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 1, further comprising at least one compound selected from among the following groups: (1) chelate compounds, (2) saccharides, (3) hydroxybenzyl alcohols and/or L-glutamic acid diacetate ~~[[on]]~~ or their salts, (4) gluconic acids and/or gluconic lactone and (5) nitro or nitroso compounds.

13. (Previously presented) An electrolytic capacitor comprising the electrolytic solution according to claim 1.

14. (Currently amended) An electrolytic capacitor ~~employing~~ comprising a compound having an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction and an electrolyte solution comprising a solvent composed of 10-80 wt% of an organic solvent, ~~and~~ 90-20 wt% water~~[[,]]~~ and at least one type of electrolyte selected from the group consisting of carboxylic acids or their salts or inorganic acids or their salts by including therein a compound having with an unsaturated bond containing chain which can undergo hydrogen addition.

15. (Currently amended) An electrolytic capacitor ~~employing~~ comprising a compound having an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction and an electrolyte solution comprising a solvent composed of 15-80 wt% of an organic solvent, ~~and~~ 85-20 wt% water~~[[,]]~~ and at least one type of electrolyte selected from the group consisting of carboxylic acids or their salts or inorganic acids or their salts by including therein a compound having with an unsaturated bond containing chain which can undergo hydrogen addition.

16. (Currently amended) An electrolytic capacitor according to claim 14, wherein the compound ~~with an unsaturated bond is a compound having a molecular chain with a carbon-carbon or carbon-nitrogen π bond such a~~ having the carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction comprises an alkyne, alkene or imine compound, and ~~comprising~~ at least one substituent selected from the group consisting of

hydroxyl, formyl, carbonyl, acyl, carboxyl, sulfonyl, sulfinyl, sulfenyl, amido, amino, alkylamino, dialkylamino, alkoxysilyl, silanol, phenylcarboxyl, nitrile, nitro, nitroso, phenol, phosphono, esters and ethers.

17. (Currently amended) An electrolytic capacitor according to claim 14, employing an electrolyte solution comprising a solvent composed of 10-80 wt% of an organic solvent and 90-20 wt% water, and having the compound with ~~an unsaturated bond containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction present on the an electrode surface.

18. (Currently amended) An electrolytic capacitor according to claim 14, employing an electrolyte solution comprising a solvent composed of 15-80 wt% of an organic solvent and 85-20 wt% water, and having the compound with ~~an unsaturated bond containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction present on the an electrode surface.

19. (Currently amended) An electrolytic capacitor according to claim 17, wherein the compound with ~~an unsaturated bond containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction is adhered to or thoroughly permeated into the electrolyte electrode surface by coating of or electrolyte solution immersion in a solution of the unsaturated compound.

20. (Currently amended) An electrolytic capacitor according to claim 14, employing an electrolyte solution comprising a solvent composed of 10-80 wt% of an organic solvent and 90-20 wt% water, and including the compound of ~~an unsaturated bond containing chain~~ with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction in the a separator of the electrolytic capacitor.

21. (Currently amended) An electrolytic capacitor according to claim 14, employing an electrolyte solution comprising a solvent composed of 15-80 wt% of an organic solvent and 85-20 wt% water, and including the compound of ~~an unsaturated bond containing chain~~ with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction in the a separator of the electrolytic capacitor.

22. (Currently amended) An electrolytic capacitor according to claim 20, wherein the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain~~ is adhered to or thoroughly permeated into the separator by coating of or ~~electrolyte solution immersion in a solution of the unsaturated compound~~.
23. (Currently amended) An electrolyte capacitor according to claim 14, wherein the content of the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain~~ in the an electrode foil is 0.01 mg/cm² to 1 mg/cm² (projectional area).
24. (Currently amended) An electrolyte capacitor according to claim 14, wherein the content of the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain~~ in the a separator is 0.01 mg/cm² to 1 mg/cm² (projectional area).
25. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2 wherein the compound having ~~an unsaturated bond-containing chain~~ an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction is soluble in water, polar solvents or protic polar organic solvents.
26. (Previously presented) An electrolyte solution for use in an electrolytic capacitor according to claim 2 comprising at least one type of electrolyte selected from the group consisting of carboxylic acids or their salts and inorganic acids or their salts.
27. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2, wherein the compound having an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain~~ is a compound having a molecular chain with a carbon-carbon or carbon-nitrogen π bond, such as comprises alkyne, alkene or imine, and ~~comprising~~ at least one substituent group selected from the group consisting of hydroxyl, formyl, carbonyl, acyl, carboxyl, sulfonyl, sulfinyl, sulfenyl, amido, amino, alkylamino, dialkylamino, alkoxysilyl, silanol, phenylcarboxyl, nitrile, nitro, nitroso, phenol, phosphono, esters and ethers.

28. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2, wherein the compound having an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain~~ is included in an amount of 0.1-10 wt% based on the total weight of the electrolyte solution.

29. (Previously presented) An electrolyte solution for use in an electrolytic capacitor according to claim 2, wherein the organic solvent is a protic solvent or an aprotic solvent, or a mixture thereof.

30. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2, wherein the carboxylic acid or its salt is selected from the group consisting of monocarboxylic acids, dicarboxylic acids, tricarboxylic acids, saturated carboxylic acids and unsaturated carboxylic acids ~~such as formic acid, acetic acid, propionic acid, butyric acid, p-nitrobenzoic acid, salicylic acid, benzoic acid, oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, fumaric acid, maleic acid, phthalic acid, azelaic acid, citric acid and hydroxybutyric acid, and their derivatives and ammonium salts, sodium salts, potassium salts, amine salts and alkylammonium salts.~~

31. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2, wherein the inorganic acid or its salt is selected from the group consisting of inorganic acids and inorganic acids having [[a]] an alkyl carbon chain like alkyl, ~~such as phosphoric acid, phosphorous acid, hypophosphorous acid, boric acid, sulfaminic acid and alkylphosphoric acids, and their ammonium salts, sodium salts, potassium salts, amine salts and alkylammonium salts.~~

32. (Currently amended) An electrolyte solution for use in an electrolytic capacitor according to claim 2 further comprising at least one compound selected from among the following groups: (1) chelate compounds, (2) saccharides, (3) hydroxybenzyl alcohols and/or L-glutamic acid diacetate [[on]] or ~~or~~ their salts, (4) gluconic acids and/or gluconic lactone and (5) nitro or nitroso compounds.

33. (Previously presented) An electrolytic capacitor comprising the electrolytic solution according to claim 2.

34. (Currently amended) An electrolytic capacitor according to claim 15, wherein the compound ~~with an unsaturated bond is a compound having a molecular chain with a carbon-carbon or carbon-nitrogen π bond such a~~ having the carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction comprises an alkyne, alkene or imine compound, and comprising at least one substituent selected from the group consisting of hydroxyl, formyl, carbonyl, acyl, carboxyl, sulfonyl, sulfinyl, sulfenyl, amido, amino, alkylamino, dialkylamino, alkoxysilyl, silanol, phenylcarboxyl, nitrile, nitro, nitroso, phenol, phosphono, esters and ethers.

35. (Canceled)

36. (Currently amended) An electrolytic capacitor according to claim 15, employing an electrolyte solution comprising a solvent composed of 15-80 wt% of an organic solvent and 85-20 wt% water, and having the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain present on the~~ an electrode surface.

37. (Canceled)

38. (Currently amended) An electrolytic capacitor according to claim 15, employing an electrolyte solution comprising a solvent composed of 15-80 wt% of an organic solvent and 85-20 wt% water, and including the compound having an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~of an unsaturated bond-containing chain in the~~ a separator of the electrolytic capacitor.

39. (Currently amended) An electrolyte capacitor according to claim 15, wherein the content of the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain in the~~ an electrode foil is 0.01 mg/cm² to 1 mg/cm² (projectional area).

40. (Currently amended) An electrolyte capacitor according to claim 15, wherein the content of the compound with an unsaturated carbon-carbon or carbon-nitrogen π bond containing chain which undergoes hydrogen addition reaction ~~an unsaturated bond-containing chain in the a~~ separator is 0.01 mg/cm² to 1 mg/cm² (projectional area).